

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number  
**WO 2005/077495 A1**

(51) International Patent Classification<sup>7</sup>: **B01D 53/34**,  
B01J 8/00, C10L 1/00

(21) International Application Number:  
PCT/US2005/003665

(22) International Filing Date: 9 February 2005 (09.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/542,470 9 February 2004 (09.02.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR REDUCING PARTICULATE MATTER EMISSIONS FROM DIESEL ENGINE EXHAUST USING ETHANOL/DIESEL FUEL BLENDS IN COMBINATION WITH DIESEL OXIDATION CATALYSTS

(57) Abstract: Considerable progress has been made in recent years in reducing toxic exhaust emissions from diesel engines. Diesel oxidation catalysts, for example, are finding increasing use in reducing carbon monoxide, hydrocarbons and the soluble organic fraction of particulate matter in such emissions. Recent innovations in surfactant stabilizing additives now enable ethanol to be blended with diesel fuel in clear, stable solutions. On combustion, ethanol/diesel fuels generate less toxic emissions than the base diesel, but surprisingly when used in conjunction with diesel oxidation catalysts, particulate matter especially is dramatically reduced. The effectiveness of a diesel oxidation catalyst attached to a diesel engine exhaust is unexpectedly enhanced by the presence of ethanol in the diesel fuel.



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